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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/626,403

07/24/2003

Alistair C.H. Rowe

16791

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7590

11/02/2004

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EXAMINER

DAVIS, OCTAVIA L


ART UNIT

PAPER NUMBER

2855

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/626,403	Applicant(s) ROWE ET AL.	
	Examiner Octavia Davis	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/24/03</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 18 are rejected under 102(b) as being anticipated by Soares.

Regarding claims 1 and 7, Soares discloses a Schottky-barrier semiconductor device comprising a semiconductor film 202 and an adjacent metal shunt 212, 213 forming an interface therebetween, wherein a strain induced at the interface changes a resistance at the interface (See Cols. 7 and 8, lines 38 – 52 and 1 – 11).

Regarding claims 2 and 3, the induced strain comprises a tensile and a compressive strain (See Col. 7, lines 34 – 36).

Regarding claims 4 and 5, the interface comprises a resistive and a Schottky interface (See Col. 8, lines 1- 5).

Regarding claim 6, the semiconductor film comprises an n-type thin film with a thickness of approximately one to ten microns (See Col. 7, lines 40 – 41).

Regarding claim 8, the metal shunt comprises gold (See Col. 7, lines 23 – 33).

Regarding claims 9 - 11, the semiconductor film 202 constitutes a substrate (See Col. 7, lines 38 – 40).

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Regarding claim 12, the film and metal contact are provided in a plate structure (See Fig. 2).

Regarding claims 13 - 15, a processor 736 receives information on the measurement of current indicative of strain combined with temperature effects wherein the processor is capable of being programmed to provide an output indicative of the strain (See Col. 12, lines 13 - 23).

Regarding claim 18, a change in the voltage is measured utilizing voltage measuring means 214 (See Cols. 7 and 8, lines 52 - 54 and 19 - 27).

### *Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Soares (6,034,404) teaches a Schottky-barrier semiconductor device.

Mills et al (3,913,213) teach an integrated circuit transistor switch.

Fleming et al (4,322,695) teach a planar transmission line attenuator and switch.

Kwok et al (4,245,230) teach a resistive Schottky barrier gate microwave switch.

Calcaterra et al (6,570,750) teach a shunted multiple throw MEMS Rf switch.

4. Any inquiry concerning this communication should be directed to examiner Octavia Davis at telephone number 571.272.2176.

If attempts to teach the examiner by telephone are unsuccessful, the examiners' supervisor Edward Lefkowitz, can be reached on 571.272.2180. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306.

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10/27/04



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